

Mr. Melvin W. Lager, Jr.
Alcoa Inc., Warrick Operations
P.O. Box 10
Newburgh, IN 47629-0010

Re: Permit Modification No:
173-14944-00007

Dear Mr. Lager:

Alcoa Inc., Warrick Operations applied for a Part 70 operating permit on September 19, 1996, for the operation of an aluminum production plant. An application to modify the source was received on October 18, 2001. Pursuant to 326 IAC 2-7-10.5 the following changes to the permit have been approved at the source:

The maximum capacity of the (1) scalper step cutter has been changed from 32,670.5 lbs of aluminum scalped from an ingot per hour, to 27,512 lbs of aluminum scalped from an ingot per hour. This change reflects a more realistic maximum capacity of the emission unit. In addition, the PM and PM10 testing requirement on the scalper step cutter has been removed from the permit because testing is not feasible for this scalper step cutter at this source. Alcoa, Inc. - Warrick Operations has accepted a production limit of 60,000 tons of aluminum scalped from an ingot per year, compliance monitoring, record keeping and reporting in lieu of PM and PM10 testing.

This Permit Modification No. 173-14944-00007 is the complete revision of Minor Source Modification No. 173-12886-00007.

The Permit Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). The source may begin operation upon issuance of the source modification approval.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter please contact Linda Quigley, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (973) 575-2555, ext. 3284 or dial (800) 451-6027, press 0 and ask for 3-6878.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

LQ/EVP

cc: File - Warrick County
U.S. EPA, Region V
Warrick County Health Department
Southwest Regional Office

Air Compliance Section Inspector - Scott Anslinger
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michelle Boner
Title V File - 173-6627-00007

PART 70 PERMIT MODIFICATION OFFICE OF AIR QUALITY

**Alcoa Inc., Warrick Operations
Junction State Routes 66 & 61
Newburgh, Indiana 47629**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Permit Modification No.: 173-14944-00007 to Minor Source Modification No.: 173-12886-00007	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:

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SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary aluminum production plant.

Responsible Official:	Melvin W. Lager, Jr.
Source Address:	Junction State Routes 66 & 61, Newburgh, Indiana 47629
Mailing Address:	P.O. Box 10, Newburgh, Indiana 47629
SIC Code:	3334, 3352
County Location:	Warrick
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source under PSD; Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to operate the following emission units and pollution control devices:

One (1) scalper step cutter, with a maximum capacity of scalping 27,512.6 lbs of aluminum ingot per hour, and exhausting to West Silo No. 1, which vents to stack number 379.1.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) when operation begins, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee,

the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission unit vented to the control equipment is in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

Compliance Requirements [326 IAC 2-1.1-11]

C.8 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.10 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

-
- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:
- (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
 - (A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and
 - (B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure

to take reasonable response steps may constitute a violation of the permit.

- (c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (e) All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.
- (f) At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

C.11 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:
 - (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
 - (2) The permitted facility was at the time being properly operated;

- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality,
Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
- (e) IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

- (g) Operations may continue during an emergency only if the following conditions are met:

- (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
- (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

**C.12 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]
[326 IAC 2-7-6]**

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally

required shall be implemented within ninety (90) days of permit issuance.

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The reports required by conditions in Section D of this permit shall be submitted to:
- Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

One (1) scalper step cutter, with a maximum capacity of scalping 27,512.0 lbs of aluminum ingot per hour, and exhausting to West Silo No. 1, which vents to stack number 379.1.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the PM emissions from the scalper step cutter shall not exceed 14.88 pound per hour when operating at the maximum process weight rate of 6.85 tons of aluminum scalped from an ingot per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.2 PSD Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) The metal scalped off ingot shall be limited to 60,000 tons per year. This limit equates to PM and PM-10 emissions of 4.28 tons per year based on the emission factor of 0.1427 pound of PM per ton of metal scalped. Compliance with this limit shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable and also satisfy the requirement of Condition D.1.1.
- (b) Any change or modification to the scalper step cutter system that may increase potential emissions to twenty-five (25) tons per year of PM, or fifteen (15) tons per year of PM-10, must have prior approval from the Office of Air Quality.

Compliance Determination Requirements

There are no Compliance Determination Requirements.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.3 Visible Emissions Notations

- (a) Visible emission notations of the scalper step cutter stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.4 Record Keeping Requirements

- (a) To document compliance with Condition D.1.2(a), the Permittee shall maintain records in accordance with (1) through (2) below.
 - (1) Calendar dates covered in the compliance determination period;
 - (2) Actual metal scalped of ingot since last compliance determination period and equivalent PM and PM10 emissions;

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

- (b) To document compliance with Condition D.1.3, the Permittee shall maintain records of visible emission notations of the scalper step cutter stack exhaust once per shift.

D.1.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.2(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**PART 70 SOURCE MODIFICATION
CERTIFICATION**

Source Name: Alcoa Inc., Warrick Operations
Source Address: Junction State Routes 66 & 61, Newburgh, Indiana 47629
Mailing Address: P.O. Box 10, Newburgh, Indiana 47629
Source Modification No.: MSM 173-14944-00007

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

Part 70 Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Junction State Routes 66 & 61, Newburgh, Indiana 47629
Mailing Address: P.O. Box 10, Newburgh, Indiana 47629
Permit Modification No.: 173-14944-00007
Facility: Scalper Step Cutter
Parameter: PM and PM10
Limit: The metal scalped off ingot shall be limited to 60,000 tons per year. This limit equates to PM and PM-10 emissions of 4.28 tons per year based on the emission factor of 0.1427 pound of PM per ton of metal scalped

YEAR: _____

Month	Metal Scalped	Metal Scalped	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Attach a signed certification to complete this report.

Alcoa Inc., Warrick Operations
Newburgh, Indiana
Permit Reviewer: Linda Quigley/EVP

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Permit Modification No. 173-14944-00007

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Permit Modification to a Minor Source Modification

Source Background and Description

Source Name:	Alcoa Inc., Warrick Operations
Source Location:	Junction State Routes 66 & 61, Newburgh, IN 47629
County:	Warrick
SIC Code:	3334, 3352
Operation Permit No.:	T 173-6627-00007
Operation Permit Issuance Date:	not issued yet
Permit Modification No.:	173-14944-00007
Permit Reviewer:	Linda Quigley/EVP

The Office of Air Quality (OAQ) has reviewed a permit modification application from Alcoa Inc., Warrick Operations, relating to the operation of a scalper step cutter.

History

On October 18, 2001, Alcoa Inc., Warrick Operations submitted a letter and application to the OAQ requesting to change the existing conditions in Minor Source Modification (173-12886-00007, issued February 1, 2001) for the scalper step cutter. Alcoa Inc., Warrick Operations stated, and OAQ has agreed, that PM and PM10 testing is not feasible on the scalper step cutter at this location. Alcoa Inc., Warrick Operations has requested that Condition D.1.3 (the testing requirement for PM and PM10) be removed from the permit and has submitted documentation re-evaluating its maximum production rate and potential emissions (the maximum production rate for the scalper step cutter has changed from 32,670.5 lbs of aluminum scalped from an ingot per hour to 27,512 lbs of aluminum scalped from an ingot per hour). In lieu of stack testing, Alcoa Inc., Warrick Operations has accepted a production limit of scalping 60,000 tons of metal scalped off ingot per year to further reduce PM and PM10 emissions to well below the PSD applicability threshold of twenty five (25) and fifteen (15) tons per year, respectively, and has also agreed to compliance monitoring, record keeping, and reporting. Alcoa Inc., Warrick Operations applied for a Part 70 permit on September 19, 1996.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

One (1) scalper step cutter, with a maximum capacity of scalping 27,512.0 lbs of aluminum ingot per hour, and exhausting to West Silo No. 1, which vents to stack number 379.1.

Note: Alcoa, Inc. estimates the maximum capacity of 8.0 percent (27,512.0 lbs/hr) of aluminum ingot is scalped off of the total amount of aluminum ingot going through the scalper step cutter (343,900 lbs/hr).

Alcoa Inc., Warrick Operations
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Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

There are no new emission units being reviewed under this permit modification.

Existing Approvals

The scalper step cutter was originally permitted under Minor Source Modification 173-12886-00007, issued on February 1, 2001.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on October 18, 2001.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (page 1 of 1).

Potential To Emit Before Controls (Modification)

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

Pollutant	Potential To Emit (tons/year)
PM	10.24 8.60
PM-10	10.24 8.60
SO ₂	0.00
VOC	0.00
CO	0.00
NO _x	0.00

Justification for Modification

This Permit Modification is being performed pursuant to 326 IAC 2-7-10.5(d) because the scalper step cutter was originally permitted as a Minor Source Modification because the potential to emit

PM and PM-10 is less than twenty-five (25) tons per year, but greater than five (5) tons per year and because the existing testing requirement is being removed from the permit and replaced with a production limit, compliance monitoring, and record keeping requirements.

County Attainment Status

The source is located in Warrick County.

Pollutant	Status
PM-10	attainment
SO ₂	unclassifiable
NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) is a precursor for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Warrick County has been designated as attainment or unclassifiable for ozone.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Greater than 250
PM-10	Greater than 250
SO ₂	Greater than 250
VOC	Greater than 250
CO	Greater than 250
NOx	Greater than 250

This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

These emissions are based upon Alcoa Inc., Warrick Operations Annual Source Emission Statement.

Potential to Emit After Controls for the Modification

The table below summarizes the changes to the total potential to emit, reflecting all limits, of the significant emission units for the modification.

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Scalper ⁽¹⁾ Step Cutter	10.21 4.28	10.21 4.28	--	--	--	--	--
PSD Thresholds	25.0 tons per year	15.0 tons per year	--	--	--	--	--
Total Emissions	10.21 4.28	10.21 4.28	--	--	--	--	--

⁽¹⁾ Because PM and PM10 testing is not feasible for this source at this location, the source has accepted a production limit of 60,000 tons of metal scalped off ingot per year (this is equivalent to PM and PM10 emissions of 4.28 tons per year based on the emission factor of 0.1427 pounds per ton of metal scalped).

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2 and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) The scalper step cutter is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 63), Subpart RRR because it is not one of the listed affected facilities.

State Rule Applicability - Entire Source

There are no changes to the State Rule Applicability - Entire Source section of the permit.

State Rule Applicability - Individual Facilities

The following rules have applicable changes as a result of this modification.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the scalper step cutter shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 (6.85)^{0.67} = 14.88 \text{ lbs PM/hr}$$

Compliance calculation:

$$(4.28 \text{ tons PM/yr}) * (\text{yr}/8,760 \text{ hrs}) * (2,000 \text{ lbs/ton}) = 0.98 \text{ lbs PM/hr}$$

326 IAC 2-2 (Prevention of Significant Deterioration)

This source has accepted a production limit of 60,000 tons of metal scalped off ingot per year to reduce PM and PM10 emissions to well below the PSD applicability threshold of twenty five (25) and fifteen (15) tons per year, respectively. This production limit is in lieu of PM and PM10 testing which was to verify the emission factor submitted by the source in determining the potential to emit of PM and PM10. Therefore, this proposed modification is not considered a major modification because it has the potential emissions of less than applicable PSD significant emission levels for any regulated pollutant which makes the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

Testing Requirements

The PM and PM10 testing requirement has been removed from this permit. In lieu of testing, the source has accepted a production limit and has agreed to compliance monitoring.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

1. The scalper step cutter has applicable compliance monitoring conditions as specified below:
 - (a) Visible emissions notations of the scalper step cutter stack exhaust shall be performed at least once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

This monitoring condition is necessary to ensure compliance with 326 IAC 6-3 (Process Operations), 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21.

Proposed Permit Changes

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

One (1) scalper step cutter, with a maximum capacity of ~~32,670.5~~ **27,512.0** lbs of aluminum scalped from an ingot per hour, and exhausting to West Silo No. 1, which vents to stack number 379.1.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

One (1) scalper step cutter, with a maximum capacity of scalping ~~32,670.5~~ **27,512.0** lbs of aluminum ingot per hour, and exhausting to West Silo No. 1, which vents to stack number 379.1.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the PM emissions from the scalper step cutter shall not exceed ~~26.64~~ **14.88** pound per hour when operating at the maximum process weight rate of ~~46.34~~ **6.85** tons of aluminum scalped from an ingot per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.1.2 PSD Limit [326 IAC 2-2] [40 CFR 52.21]

(a) **The metal scalped off ingot shall be limited to 60,000 tons per year. This limit equates to PM and PM-10 emissions of 4.28 tons per year based on the emission factor of 0.1427 pound of PM per ton of metal scalped.** ~~PM and PM-10 emissions from the scalper step cutter shall be limited to 5.71 pounds per hour and 3.42 pounds per hour, respectively.~~ Compliance with this limit shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable and also satisfy the requirement of Condition D.1.1.

(b) Any change or modification to the scalper step cutter system that may increase potential emissions to twenty-five (25) tons per year of PM, or fifteen (15) tons per year of PM-10, must have prior approval from the Office of Air Quality.

Compliance Determination Requirements

~~D.1.3 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1-1-11]~~

~~During the period between 6 and 12 months after issuance of this permit, in order to demonstrate compliance with Condition D.1.2, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.~~

There are no Compliance Determination Requirements.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

~~There are no Compliance Monitoring Requirements applicable to this emission unit.~~

D.1.3 Visible Emissions Notations

- (a) Visible emission notations of the scalper step cutter stack exhaust shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.**
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.**
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.**
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.**
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.**

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

~~There are no Record Keeping and Reporting Requirements applicable to this emission unit.~~

D.1.4 Record Keeping Requirements

- (a) To document compliance with Condition D.1.2(a), the Permittee shall maintain records in accordance with (1) through (2) below.**

- (1) Calendar dates covered in the compliance determination period;**
- (2) Actual metal scalped of ingot since last compliance determination period and equivalent PM and PM10 emissions;**

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all

reports required by this permit.

- (b) To document compliance with Condition D.1.3, the Permittee shall maintain records of visible emission notations of the scalper step cutter stack exhaust once per shift.**

D.1.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.2(a) shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Conclusion

The operation of this scalper step cutter shall be subject to the conditions of the attached proposed Permit Modification No. 173-14944-00007.

Appendix A: Emissions Calculations
Particulate Matter
From Scalper Step Cutter Operations

Page 1 of 1 TSD App A

Company Name: Alcoa Inc., Warrick Operations
Address City IN Zip: Junction State Routes 66 & 61, Newburgh, IN 47629
MSM: 173-14944-00007
Plt ID: 173-00007
Reviewer: Linda Quigley/EVP
Date: November 5, 2001

Material	Maximum Rate lb/hr	Emission Factor lb PM/ton	Potential Emissions lb/yr	Potential Emissions ton/yr
Aluminum Ingot	27,512.0	0.1427	17,195.72	8.60

Uncontrolled Potential to Emit

8.60

Material	Maximum Rate lb/hr	Emission Factor lb PM/ton	Potential Emissions lb/yr	Potential Emissions ton/yr
Aluminum Ingot	13,698.6	0.1427	8,561.98	4.28

Controlled Potential to Emit

4.28

METHODOLOGY

Potential emissions (tons/yr) = Maximum rate (lb/hr) * (8760) / (2000) * emission factor (lb PM/ton) / (2000)

Emission Factor supplied by Alcoa Inc., Warrick Operations - based on in house testing.

ALCOA, Inc. - Warrick Operations has accepted a production limit of 60,000 tons per year of metal scalpe off ingot which equates to 8 % of 750,000 tons per year of ingot.